9,412 patients (documented about route of access and procedure strategy) were evaluated (STEMI, n=6,798 and NSTEMI, n=2,614).
Results: Based on baseline characteristics, the patients in TFI group (n=7,607) were older, more over-weighted, female patients, resuscitations before arrival, STEMI patients, worse Killip class and MR grade. TRI group (n=1,805) had lower in-hospital morbidities, especially major bleedings and puncture site complications, ICU admission, inotropics apply, all cause mortality and MACE at discharge and 1 month later. The post-TIMI flow and success rate of PCI were not significantly different between two groups, however. In multivariate analysis, type of myocardial infarction, inotropic apply, ICU admission and all cause mortality were related to the route of access. In-hospital morbidities and MACE at 1 month were not related to the route of access.
Conclusions: Patients of TRI group had showed less STEMI patients and lower all cause mortality. The in-hospital morbidities and 1 month MACE of TRI were not different from those of TFI, however. It requires prospective and randomized controlled trials to assess clinical efficacy and in-hospital morbidities related to route of access for interventional procedure adequately.

TCT-461

Abstract Withdrawn

TCT-462

Invasive Strategies And Outcomes For Non-ST-segment Elevation Acute Coronary Syndromes: A Twelve-year Experience From SWEDEHEART

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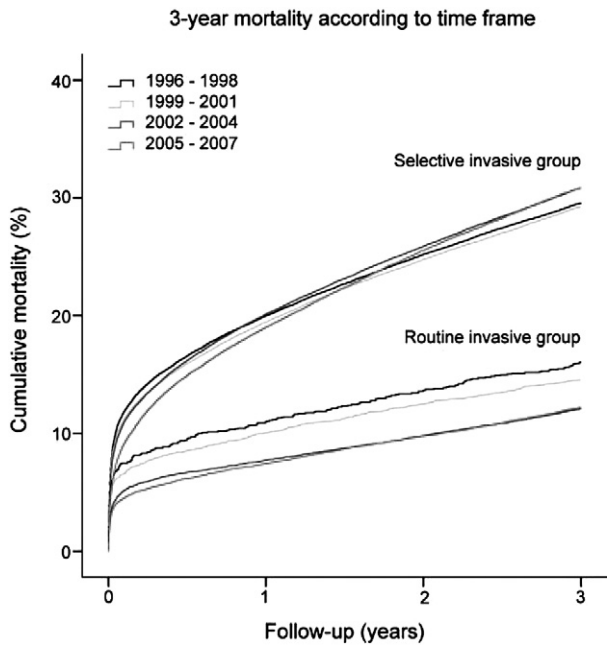
Background: Despite the recommendations of a routine invasive strategy (RIS) over a selective invasive strategy (SIS) in the most recent and previous clinical practice guidelines for non-ST-segment elevation acute coronary syndrome (NSTE-ACS), data on the implementation of these treatment strategies in clinical practice over a longer time period is currently not available.
Methods: In SWEDEHEART, baseline, procedural characteristics and outcomes are recorded of all patients undergoing PCI. The RIS was retrospectively defined as coronary angiography (CAG) and subsequent revascularization) <3 days after admission. The SIS was defined as CAG later then 3 days or none at all. Event rates were estimated with the Kaplan-Meier method.
Results: Between 1996 and 2007, 204,092 consecutive NSTE-ACS patients were recorded in SWEDEHEART. The use of a RIS increased from 3.8% in 1996-1998 to 37.4% in 2005-2007. The largest absolute increase was observed in low-risk patients, as indicated by the FIR risk score. The use of the SIS decreased from 96.2% in 1996-1998 to 62.5% in 2005-2007. In the total population, there was a gradual decrease in three-year all-cause mortality, from 29.1% in 1996-1998 to 23.9% in 2005-2007. This was mainly observed in patients undergoing a RIS.



Conclusions: In conclusion, there has been an increase in the use of a RIS in NSTE-ACS patients over the course of 12 years in Sweden. absolute increase was mainly observed in low-risk patients, while a similar relative increase was observed in all risk groups. There was a decrease in 3-year mortality over the time course, but this was not observed in SIS patients.

TCT-463

In-hospital Mortality Following Primary Angioplasty in the Setting of Cardiac Arrest is High and Varies Depending on Patient Location at the Time of Arrest: A UK Registry Database Study

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Background: Despite advances in therapeutic strategies, cardiovascular disease is the leading cause of death particularly among high-risk patients including those that present with cardiogenic shock and those that sustain cardiac arrest (CA). The mortality rate among patients undergoing primary angioplasty (PPCI) in the setting of CA and whether the location where the patient sustains cardiac arrest influences the outcome is not known in the contemporary era. Aims: The aim of this study is to describe the patient population accepted for PPCI sustaining CA to determine in-hospital (I/H) mortality and to determine whether the location where the patient experiences CA influences outcome.
Methods: Data were collected prospectively on all patients undergoing PPCI for ST elevation myocardial infarction in the setting of CA to a large UK tertiary cardiac centre between January 2006 and October 2011. All patients sustaining CA either pre-hospital (before and after the arrival of ambulance), during PPCI, or at any stage during hospitalisation were recorded.
Results: In total, 335 patients (mean age 62.5 years) sustained CA during the study period. Of these, 317 (94.6%) had PPCI performed. 53 (15.8%) patients sustained CA prior to ambulance arrival, the remainder occurred (282[84%]) either after the ambulance arrived or in-hospital (emergency room, medical ward or catheter lab). There were more patients with cardiogenic shock who sustained CA before ambulance arrival (38.5%). The I/H mortality was 21.2% in the overall CA patients. Those sustaining CA before ambulance arrival experienced the highest mortality 32.1% compared to those (19.1%) that had CA after ambulance arrival, in-hospital and in the catheter lab (Odds Ratio 1.99, 95% Confidence Interval 1.04-3.8). Furthermore, patients experiencing asystole or electromechanical dissociation were associated with increased I/H mortality compared to those experiencing ventricular arrhythmias (OR 2.83; 95% CI 1.56-5.14).
Conclusions: The I/H mortality remains high among patients undergoing PPCI in the setting of CA. The I/H mortality is particularly high among those that arrest prior to ambulance arrival.

TCT-464

The Killip Classification is Still Useful in Current Practice? An analysis of 4342 patients in the Regional Acute Myocardial Infarction Registry of Brittany (ORBI).

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Background: The use of simple clinical criteria are there still of interest in our daily practice with the advent of new markers of severity? This is the question which we wanted to answer by revisiting the Killip classification.
Methods: We analyzed data collected between June 06 and October 11 in the "Observatoire Régional Breton sur l'Infarctus (ORBI)", a prospective registry of all patients admitted to an interventional cardiology centre of Brittany in the acute phase of a STEMI, within 24 h of symptoms onset. Main clinical data are presented and intra hospital outcome was compared regarding of the Killip class determined at admission.
Results: Among 4342 patients included in the ORBI registry, Killip 1, 2, 3 and 4 respectively represented 3821 (88%), 281 (6.4%), 94 (2.2%), and 146 (3.4%) patients. Main clinical data are summarized in table 1. There is a significant relation between the Killip class and the intra hospital mortality (respectively 104 (2.7%), 27 (9.6%), 18 (19.1%), and 73 (50%) for Killip 1, 2, 3 and 4, $p<0.001$), the hospital length of stay (6.6±3, 8.0±5, 9.1±6, and 7.6±7, $p<0.05$) and the left ventricular systolic ejection fraction at discharge (51.3±10, 44.1±11, 41.7±12, and 38.4±14, $p<0.05$).

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n	Killip class 1 n=3821	Killip class 2 n=281	Killip class 3 n=94	Killip class 4 n=146
Patients				
Age (years)	61.7 ± 13	70.0 ± 13.2	69.1 ± 12.4	69.5 ± 13.1
Male	2995 (78.4%)	188 (66.9%)	70 (74.5%)	96 (65.8%)
Hypertension	1448 (38.0%)	148 (53.2%)	51 (54.3%)	75 (53.2%)
Diabetes	391 (10.5%)	45 (16.5%)	19 (20.2%)	25 (17.1%)
Current smoker	1469 (38.7%)	60 (21.7%)	29 (31.2%)	34 (23.3%)
Prior myocardial infarction	260 (6.8%)	26 (9.3%)	14 (15.0%)	14 (9.6%)
STEMI				
Anterior area	1576 (41.3%)	171 (61.1%)	54 (58.7%)	65 (44.8%)
Mean delay* (minutes)	175 ± 150	210 ± 180	220 ± 144	154 ± 137
Thrombolysis prior to admission	638 (16.7%)	36 (12.8%)	10 (10.6%)	12 (8.2%)
Coronary angioplasty	2734 (71.6%)	200 (71.2%)	68 (72.3%)	107 (73.3%)
3-vessels or left main coronary artery disease	621 (16.7%)	65 (24.3%)	32 (36.0%)	53 (41.4%)
Haemodynamic at admission				
Heart rate (/min)	75.2 ± 17	80.7 ± 19	91.6 ± 22	82.7 ± 35
Systolic arterial pressure (mmHg)	133.8 ± 25	127.8 ± 27	122.1 ± 29	88.3 ± 28
Need for a circulatory assistance**	75 (1.9%)	21 (7.4%)	12 (12.7%)	61 (41.8%)
*"Mean delay" is mean delay between onset of symptoms and admission in the interventional cardiology centre.				
**"circulatory assistance is intra aortic balloon pump and/or extracorporeal life support.				

Conclusions: Killip classification is still relevant for prediction of intra hospital outcome, notably intra hospital mortality.

TCT-465

Prevalence, Correlation and Clinical Outcome of Intra-procedural Stent Thrombosis in Patients Undergoing Primary Percutaneous Coronary Intervention for Acute Coronary Syndrome

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Background: The occurrence, correlation and clinical outcome of intra-procedural stent thrombosis (IPST) in patients undergoing primary percutaneous coronary intervention (PCI) in the setting of acute coronary syndromes (ACS) have not been previously described.
Methods: This retrospective study comprised a review of 1901 consecutive ACS patients who received primary PCI in our center during the period of January 2006 to January 2011. IPST was defined as new, reappearing or increased (compared to baseline) thrombus within the deployed stent before the index PCI procedure was completed. All angiograms were independently reviewed frame-by-frame for the incidence of IPST. Patient demographics, coronary risk factors, follow-up visits, and all relevant information were retrieved from the hospital database. Patients with and without IPST were compared with respect to clinical characteristics, angiographic parameters and cardiac events at 1-year follow-up.
Results: Overall, there were 23 cases of IPST detected in the study cohort, thus, the prevalence of IPST was 1.2% in this group. There were no significant differences in terms of baseline clinical characteristics between the two groups. Patients with compared to those without IPST had significantly more bifurcation lesions involved, and more thrombus burden at baseline. IPST group compared to no IPST group had 100% more major adverse events on 1-year follow-up (30.4% vs. 14.4%, P=0.02).
Conclusions: IPST was a rare complication of PCI in the setting of ACS. It correlated with a few procedural factors and was more likely to cause cardiac events during 1-year follow-up.

Table. Clinical characteristics, angiographic parameters, and clinical event rates comparing patients with vs. without IPST

Variable	IPST (N=23)	No IPST (N=1878)	p value
Age	61.1 [53.2, 69.1]	60.5 [52.1, 70.0]	0.91
% Diabetes Mellitus (%)	21.7 (5/23)	20.2 (380/1878)	0.86
% Previous MI (%)	17.4 (4/23)	21.6 (405/1878)	0.63
% Previous PCI (%)	17.4 (4/23)	19.2 (361/1878)	0.82
Minimum Pre-PCI TIMI Flow	0.00 [0.00, 1.00]	2.00 [0.00, 3.00]	<.0001
# of Attempted Vessels	1.00 [1.00, 1.00]	1.00 [1.00, 1.00]	0.10
1 year composite MACE, %	30.4% (7)	14.4% (270)	0.02
IPST, intraprocedural stent thrombosis; MI, myocardial infarction; PCI, percutaneous coronary intervention; TIMI, Thrombolysis in Myocardial Infarction; MACE, major adverse cardiac events			

TCT-466

Clinical impact of the use of thrombus aspiration devices in primary angioplasty. Insights from the multicentric study ESTROFA-MI

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Background: Primary angioplasty is the best reperfusion strategy in ST elevation myocardial infarction (STEMI). Thrombus aspiration with different devices might add a clinical benefit following the results of the TAPAS study although findings from the recent INFUSE-AMI trial questions this statement. We sought to analyze the clinical impact of the use of aspiration devices.
Methods: From a retrospective multicenter (16 hospitals) study that compared different drug-eluting stents in the STEMI setting we have analyzed the clinical impact of the use of thrombectomy. Patients were consecutively included. Demographic and clinical data were collected and a systematic follow up was performed.
Results: A total of 734 patients were included. A thrombectomy device was used in 211 patients (29%). After two years follow up the survival free from death and myocardial infarction (MI) was 95% in the group with thrombectomy vs. 87.2% in the group without (p=0.001) and the survival free from death, MI and TLR was 93% and 84.6% respectively (p=0.002). Definite plus probable thrombosis incidence was 1% in the group with thrombectomy and 3.2% in the group without (p=0.09). Thrombectomy turned out to be an independent predictor of death and MI (HR 0.2 IC 95% 0.08-0.6; p=0.002) as well as an independent predictor of the combined end point of death, MI and TLR (HR 0.4 IC 95% 0.2-0.8: p=0.02) in a Cox regression analysis. This benefit was independent of the type of stent used.
Conclusions: The results of this multicenter retrospective registry show that the use of thrombus aspiration devices in the primary angioplasty with DES was associated to better clinical outcomes.

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